Attentional mechanisms in learned predictiveness

Lauren Shone (lsho0771@uni.sydney.edu.au), School of Psychology, University of Sydney
Evan Livesey (evan.livesey@sydney.edu.au), School of Psychology, University of Sydney

In novel situations, learning is biased in favour of previously predictive information. One particularly robust example of this is the learned predictiveness effect which has proved crucial in theorising about the role of attention in learning. However, the exact nature of this bias has only recently been questioned. In line with a role of inferential reasoning, Mitchell et al. (2012) have shown that learned predictiveness is susceptible to instructional manipulation, whereby instruction can reverse the effect. The current experiments further examine this hypothesis. While experiment 1 found a clear effect of instruction, this was only partial, obliterating learned predictiveness instead of reversing it. Subsequent experiments manipulated instruction and prior predictive utility orthogonally in order to test the relative contribution of inferential reasoning and automatic processes in generating this bias. It was found that even for information explicitly instructed as important, learning is biased in favour of previously predictive over previously non-predictive information. The implication of these findings is discussed in relation to theories of learning and attention.